



1935


General Business Conditions

THE events of the past month present a striking contrast between the natural progress toward normal business conditions and prosperity, on the one hand, and, on the other, the interference with this progress which arises from conflicting aspirations, rivalry and distrust, all destroying the ability of the nations and of groups within nations to work together in the common cause. The best evidence of progress is in this country, in the continued good business reports and the signs of improvement in price relationships and other economic conditions, and in sentiment. The chief anxieties, on the other hand, have related to European affairs.

Effects of European Situation

The tension that has developed from the Italo-Ethiopian dispute has had a prompt effect on the economic situation, causing a transfer of capital out of Europe for safety. Also the recurring doubts as to the security of the guilder and French franc have come to the fore again, at least temporarily, and these influences together have started a new and heavy gold movement to the United States, the engagements amounting to over \$220,000,000 in less than three weeks.

According to various market comments, the decline in security prices in this country in the middle of the month was due to selling on the "war scare," on the theory that foreign nations and governments would liquidate holdings of securities in our markets, in order to withdraw the proceeds. Obviously this theory is not consistent with the fact that the movement of capital is toward, not away from, this country; and there are many reasons why it should continue in this direction, all suggesting a demand for American investments and commodities. However, it is right to emphasize the disturbance to business confidence and orderly progress that the international situation is causing. The significance of the gold movements is that they are in-



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spired not by normal trade requirements, but by disorder and distrust. They reflect the lack of settled economic and political conditions, under which capital would seek long-term investment instead of fleeing from one market to another for temporary security as is now the case.

The United States gets no lasting benefit from these gold receipts, for the capital may be withdrawn as rapidly as it was sent. Moreover, the gold is not needed; in fact it is a menace, since bank reserves are already sufficient to support a credit expansion far greater than any this country has ever known, and additions to the gold stock only increase the temptation and the pressure to put it to inflationary uses.

Also, the whole world is suffering from the disorder in trade and currency relationships of which these gold movements are symptoms. The struggle to restore prosperity is handicapped because it is on the basis of restricted trade and narrowly protective policies, and the result is that in all countries the export industries are lagging and impeding the domestic recovery. Observers agree that Great Britain has had probably the fullest business recovery of any Occidental country, but the continued depression of her export and shipping industries prevent the upswing from being complete. The latest "Monthly Review" of the Midland Bank takes an optimistic view of the British situation but acknowledges the drawbacks, as follows:

The recovery has carried us in some important respects to a new high level of activity . . . An important difference between conditions ten years ago and now lies in the further shrinkage of export trade . . . The volume of our exports, notwithstanding some recent improvement, is still only about three-quarters of what it was in 1924 . . . Five-sixths of our current production is for consumption at home, and it thus becomes still more evident that for further business recovery we must continue to look mainly to the home market . . . Here the signs are still propitious for a continuance of the upward trend.

Sir Arthur Salter, another observer whose views will carry authority, writes of the Brit-

ish situation in the October number of "Foreign Affairs", in part as follows:

The internal recovery, with the accompanying increase in employment, has doubtless not reached its limit. But future progress is likely to be both more difficult and slower. A very large proportion of the unemployed consist of those whose normal occupation is in export industries or in industries dependent upon them, and who can be transferred to other localities and other kinds of work only with the greatest difficulty. It is not easy to foresee in any near future a reduction of employment by one-half, that is from two million to one, unless there is a substantial recovery of the export trade.

Similar illustrations could be given for other countries whose indexes of industrial activity have been on the upgrade, as Italy and Germany. They afford a lesson as to the interest of all countries in stabilizing currencies and establishing more rational trade policies based on the mutual benefits of trade. If, instead, the rival aspirations and interests of the nations should bring on new conflicts, what outcome could there be except a paralysis of all cooperative effort and adjustment, renewed currency disorders, and a further blockade of trade, all tending to mutual impoverishment?

Business Progress in U. S.

These are conditions from which the United States suffers with other countries, in our own reduced trade and our losses on debts due which cannot be paid because of trade conditions. However, in view of the character of the business reports, the emphasis in this country plainly belongs on the progress that is being made despite the handicaps. No abatement of confidence as to the outlook for the next few months is apparent. Trade news during September has been up to expectations, particularly in retail business and the general merchandise lines. The gain in department store sales in the New York City area in the first half of the month, over a year ago, was more than 10 per cent, the largest with one exception since early in 1934. Elsewhere the increase has been greater, and wholesale trade has been active on reordering of Fall goods. The railroads are moving more traffic than at any time in four years.

Some irregularities in the course of industrial production are to be noted, but for the most part they are attributable to the curtailment in the automobile industry, which of course is temporary and due to the changeover to new models. The check to the rise in steel mill operations, at slightly below 50 per cent of capacity, is partly due to this cause, and partly to the advance of the season, since the "Fall rise" came this year in mid-Summer.

The most favorable factors of the month, in their effect upon sentiment, have been the further advance in prices of farm products and other raw materials, and the continued strong showing made by the machinery business.

Moody's index number of fifteen staple commodities has advanced from 165 (Dec. 31, 1931 = 100) to 172 within the month. The farm cash income this year is the highest since 1930. The firmness in the commodity markets is extending to finished goods; the fears of price slashing which attended the break-up of the N.R.A. are now proved unfounded, and buyers are covering their requirements more freely. This applies to purchases by the industries as well as to merchants. Sales of copper have been heavy for two months, both domestic and export, and the domestic price has been marked up again to the code figure of 9 cents. Lead and zinc are higher under more active demand. With building figures continuing to run above a year ago lumber business has been good; the lumber statistics are vastly better than last year, and the markets are firm.

Machine tool orders showed another gain in August for the sixth consecutive month. They were more than three times as great as one year ago, and the highest since the Fall of 1929. Moreover, the industry has held in Cleveland during September an impressive exhibition of new tools and labor-saving machinery, and the heavy attendance and interest shown are safe indicators that the improvement in this business will hold for some time. The possibilities, after five years during which the industries have not kept up with new developments nor even made desirable replacements, are almost unlimited.

Under present conditions machine tool sales supply a significant indicator of business. They show both reviving confidence and better trade. If manufacturers are to buy new equipment they must believe in their ability to make it pay them a profit, and this implies both increased sales of their products and greater confidence in the general situation and in the recuperative powers of the economic system. Also, it is certain that improved machinery contributes importantly to recovery, for it permits cost reductions which sell goods.

Importance of the Farm Gains

It is hardly deniable that the impetus to the general business improvement originated on the farms, in the improved relationship between farm and industrial prices, which gave farm products a greater value in exchange for the products of industry. According to the calculations of the Department of Agriculture farm prices this year have represented on the average about 85 per cent of the prices of goods purchased, taking the 1909-14 average of both as 100. This compares with 73, the average for 1934, and 55 at the low point.

All the farm markets have had a vast improvement, through the reduction or elimination of the surpluses accumulated even before the depression. Balanced relationships be-

tween supply and demand have been restored, and buyers are no longer afraid of the markets, or unwilling to carry the stocks that accumulate during the season of production. It is not the usual thing to welcome a calamity such as the drouth of 1934, but the chief cause of the elimination of the excess supplies evidently was the drouth; and despite the distress of those affected the consequences in the markets have been beneficial.

Wheat Imports Necessary

The advance in wheat prices of around 10 cents a bushel in the past month is evidence of the strengthening of the wheat position by the third successive short crop. The Government report of September 1 showed a further reduction in the estimate to 595,000,000 bushels, which is 30,000,000 to 50,000,000 below requirements. Moreover, a record percentage of this wheat is unfit for milling, due to low grades and light test weights. Heavy imports of Canadian wheat, paying the 42-cent tariff, will be required, the amount being estimated generally at 50,000,000 bushels and by some authorities much higher. Thus not only is the United States surplus fully absorbed (except perhaps of feed wheat), but this country will help relieve the world surplus.

Canada's crop also is reduced by the rust disease, to below 300,000,000 bushels from an early indication of nearly 400,000,000; and much Canadian wheat also will not be of millable quality. The Argentine crop is a failure over a wide area, due to drouth, and may provide no more than 50,000,000 bushels for export, according to trade estimates; and the Australian exportable supply is below normal. This will direct the world demand chiefly to Canada. Thus drouth and disease apparently will solve the problem of the Canadian surplus, and rescue the Dominion Government from the difficulties in which its price-fixing ventures seemed, three months ago, to have hopelessly engulfed it.

The cotton surplus is not absorbed completely, but is reduced from over 13,000,000 bales (world carryover at the high point) to around 9,000,000, of which 6,000,000 is controlled by Government agencies under last season's 12 cent loan. The crop is estimated at 11,489,000, which should be readily taken this season. Foreign competition is temporarily less pressing. It turns out that the Brazilian crop was overestimated by that Government, and that Brazilian cotton was oversold; hence the price advantage over American cotton has disappeared. Indian cotton also has advanced relative to American. It should be stated that these shifts are the natural fluctuations of the markets, and afford no reason for complacency as to the dangers of foreign competition with American cotton growers.

It is pertinent to review, in connection with the 6,000,000 bales of cotton held under Government control, a report presented to Congress at the end of August on the results, up to June 30, 1935, of the operations of the Federal Farm Board, predecessor of the A.A.A., in the effort to stabilize the grain and cotton markets. The report was prepared by a Senate agricultural sub-committee headed by Senator McNary. It states that actual and prospective losses to the revolving fund of \$500,000,000, which Congress created in 1929, have amounted to \$344,900,000, or 69 cents out of every dollar of principal appropriated. The Farm Board consisted of representative men, prominent, sympathetic to its purposes, and in all respects able to give the program a fair trial. However, the outcome was to perpetuate the surplus problem at the direct cost above stated, and at what indirect costs no one knows, except that the problem remained until Nature, seemingly moved by pity, took a hand.

In the livestock situation there is little new. Hog markets have continued strong, and in view of the small pig crop of last Spring, which is now beginning to move to slaughter, the Department expects receipts to be subnormal and the Fall price decline to be less than usual. The Fall pig crop to come to market next Spring is larger than a year ago, and the next Spring crop seems certain to show a substantial increase. Thus the next phase of the hog cycle, beginning late next Winter, is for increasing supplies. Cattle prices are well below the top. The high prices for meat have met resistance from consumers who are buying and eating less, and evidently this attitude has established the ceiling to the price rise.

The Question of Farm Parities

All this indicates that the conditions under which the A.A.A. was established have radically changed. The pertinent question now is not as to the need of emergency action to balance supply and demand in these major products, but as to the policy after the emergency is past. Naturally there is no thought within the circles of the A.A.A., and doubtless very little elsewhere, that farming might now be allowed to stand on its feet, considering that the handicap of unsupportable surpluses has been removed. Suggestions of that character would undoubtedly be received with the argument that if the controls were dropped the emergency would shortly recur, and also with claims that prices are not yet high enough, since they are still below the theoretical parity as laid down in the Farm Act.

The arguments above stated, taken together, present very well the goal of the agricultural adjustment program. The contention that it is necessary to preserve control as a guard against recurring overproduction admits the obvious

fact that the program has made little progress toward the only natural and lasting solution, which is a reduction in the proportion of the population engaged in farming, and a shift of high-cost farmers to other pursuits. Secondly, the principle of "parity", to be achieved through control, plainly implies that farmers are entitled as a body to a guaranteed return. This evidently must apply to all those engaged in farming, regardless of how many they may be, also to those who may be attracted to the land by this promise of parity.

In dealing with the emergency this program has had value, and the "parity" principle has been a useful guide, but with the emergency receding there are reasons for re-examining it. The impracticability of guaranteeing a return to *all* occupations, and maintaining in each all those who wish to engage in it, is evident. In times of general prosperity all occupations enjoy a "parity" return, using the term to signify the state of balance in prices, wages and profits which is the essential condition of prosperity. However, the parity cannot possibly be defined in terms of price relationships of any past period, or in terms of the desires of the producers in question. Constantly the parities alter. All technical or natural developments, affecting production costs, affect them; if costs are reduced in one occupation more than in others the producers can no longer expect, nor do they any longer need, the same prices for their products relative to other prices. Unless the lower prices are accepted there can be no distribution through the economic system of the benefits of cost reduction; for insistence on the old parity, and restriction of production to obtain it, must lead to a general state of scarcity. Also developments in other industries, producing competitive products, may affect the fair exchange value in any industry, since fewer people will be required to make the displaced product and high-cost producers can be turned to something else.

The principle is that prices must be free to fluctuate regardless of past or desired parities, to assure the balanced distribution of the population among the various occupations, and also the passing on to everyone of the benefits of progress, in the form of greater abundance and higher standards of living.

Discussion of these principles is pertinent in view of the resistance of consumers to the rise of food prices, even with the theoretical parities still not reached; and especially in view of the rising tendency of finished goods also, following the advance of raw materials. Higher prices of woolen goods, blankets and carpets, following higher prices for wool, give an illustration. The Fairchild index of department store prices showed a small rise during August for the first time since April, 1934,

reversing the downward trend of seventeen months. With retail food prices up 37 per cent in a little over two years the cost of living may become an issue, raising wage questions to hamper the industrial recovery.

All of these matters enter into the question of agricultural policy. The natural response of farmers to conditions of supply and demand will be to produce more hogs, more wheat, and more of other products now scarce, and less potatoes and other crops now in over supply. Will they be paid benefits for increasing their production as well as reducing it?

Automobile Prospects

Among the industries the chief contribution toward getting back to normal conditions is being made by those which are finding ways, through superior management and improved methods, of making prices to fit the consumer's purse, and therefore are benefiting from the accumulated wants. The automobile industry is always one of the leaders in improving its products and methods, and the new models to be introduced next month will be offered at lower or unchanged prices. Undoubtedly automobile operations, together with activity in the parts and accessory companies, and in the industries supplying materials, will be a major support to business this Fall. The prospect for these industries is almost an assurance against a material slackening of general industrial activity over the next three months or more, except of the seasonal variety. In steel the takings of sheets and other automotive materials will be an offset to the customary recession in other lines. Also, the wage disbursements of these industries will support merchandise trade in their areas, through the Fall and the holiday season.

The household and farm equipment industries continue to make a good showing. Manufacturing industries generally are paying hourly wage rates equal to those of 1929, in some cases higher, but many have found ways to keep prices down. The rise in machine tool and machinery sales is because improved machinery saves labor and makes it possible to produce at lower costs. It should be noted that while hourly rates are back to 1929, the hours of work that the industries are able to give are shorter, and weekly earnings consequently less.

Heavy equipment industries, such as heavy construction, railway and utility equipment, are still laggard. The customers of these industries must look farther ahead than the short or medium-term trade prospect, and the important need is confidence in the general political and economic situation. The Federal deficit, the unemployment, prospective tax burdens and uncertain profits all impair this confidence. Also, the railways, commercial builders and others using this type of materials

and equipment are slow to recover their buying power. The wage level is a burden to them. Further, they will in many cases need access to the capital markets, and while these markets are more receptive to refunding issues, and to tested enterprises, investors show no more readiness than heretofore to venture their capital in uncertain new issues, under present conditions.

The Textile Situation

The woolen and rayon divisions of the textile industry are contributing good reports: the former with sustained high operations and a satisfactory volume of early orders for Spring goods, and the latter with the largest deliveries of yarn, during August and September, in its history. Silk business also has been in good volume, but the rapid rise in raw silk prices, from under \$1.40 to near \$2 in about two months, is unwelcome. It temporarily stimulates orders for cloths and hosiery, but silks must compete with rayon, and when the raw material advances out of line demand is diverted.

Cotton is the backward division of the textiles. Goods business improved toward the end of the month, but earlier the mills were unable to sell their production. The domestic consumption of cotton in August was slightly below a year ago, and in the last cotton year (August to July) it was lower than in either of the preceding two years. This suggests that goods stocks are low, and a better year may be in prospect. In an interview in the New York World-Telegram Mr. Robert Glassford, President of Bliss Fabyan Co., Inc., and one of the trade leaders, stated that—

The thing that is distressing the industry most just now is the question of who is going to get the processing tax money in the event the A.A.A. is declared unconstitutional by the Supreme Court. The processors and the distributors both want it, and they are trying, with relatively little success, to make contracts which will insure their getting it.

The uncertainty as to the A.A.A. cases is a factor in the calculations of many lines of business.

Of course the difficulties of the cotton manufacturers antedate the tax confusion, and they are the subject of regular investigation both within and without the industry. A Committee of Cabinet officers made a report and recommendations very recently, calling attention to obsolescence and over-expansion. Now a new inquiry into textile prices is about to be launched in Washington, from the viewpoint of the consumer, "to determine whether the spread between factory costs and consumer prices may be reduced."

Inquiries with a view to enlarging consumer purchasing power by lowering prices, should be welcomed, as recognition of the fact that the policy of raising costs and prices and passing them on to consumers does *not* raise the aggregate of buying power. There will be data

in abundance for the committee. The Federal Trade Commission report recently made public, and referred to in this Letter last month, together with other sources, will inform the investigators that all divisions of the cotton textile industry operated at a loss in the last six months of 1934, and again in the first six months of 1935. The annual report of the important Pepperell Manufacturing Co. has just been published, revealing a loss in twelve months of \$438,000 upon sales of \$29,000,000, the largest volume in its history. The old established Naumkeag Steam Cotton Co. has a strike on its hands, following wage adjustments which it undertook to make so that it might run without continuous and ruinous losses. Nothing could be more useful than a full report as to why the industry is losing money, employment has been irregular, and consumers are complaining of price increases.

It is allowable to remark, in connection with the inquiry into price spreads, that this is a very old business and that every phase of it has been under study for more than 100 years by the men engaged in it, all stimulated by the desire to reduce their costs, strengthen their trade positions, and make money. It would be a truly notable achievement for a committee from outside the industry to inaugurate important changes that are within the control of the owners. It might be helpful, however, for the committee to give some attention to the factors which occasion so much perplexity to the owners and managers. In the interview above quoted Mr. Glassford made a concise statement of what is necessary, namely, to "reduce the cost of manufacture to a point where the selling price will net a profit." This naturally implies selling prices which the consumer can pay, and which will move goods.

Undoubtedly the problem involves the relative remuneration of the textile workers, and their hours of labor, as compared with the income and hours of labor on the farms and among the millions of unorganized workers who constitute the greatest body of textile consumers. The rise in the costs of textile operation, due to the processing tax, the cotton program, and the 70 per cent increase in the average hourly wage, clearly has been more than the industry can bear. The evidence to that effect is to be found in the low employment it is giving, and its backwardness in the general progress that has been made this year.

Money and Banking

The feature of the financial situation during September has been the resumption of large scale gold shipments to the United States. In the first 26 days of the month net gold imports totaled \$82,546,000, which compares with only \$45,983,000 during all of August and \$16,229,000 in July. In addition there was on the 26th

\$146,435,000 en route to this country, or engaged for shipment; and the fact that certain foreign exchange rates were still below the gold export point indicated that the movement was not then over. The origin of these shipments was as follows: Holland \$47,087,000; France \$71,798,000; England \$57,387,000; Canada and India \$50,838,000.

We have already referred to the gold movement as representing largely a movement of capital out of Europe. This reflects in part the alarm as to the international situation which arose out of the Italo-Ethiopian dispute, and in part renewed uncertainties in the gold bloc countries, while on our side the promising trend of business in this country has invited the investment of European funds in American securities.

The gold shipments above cited will bring the total of net gold imports into the United States since the first of the year to over \$1,000,000,000, and they will raise the monetary gold stock to above \$9,400,000,000, compared with \$6,829,000,000 immediately following the stabilization of the dollar on January 31, 1934. This unprecedented piling up of metallic reserve is the explanation of all that has occurred in the money markets in the last twenty months: the huge accumulation of idle funds, the record low interest rates, and the gradual adjustment of prices of prime securities to the pressure of money for investment.

Trend of Bank Credit

The volume of bank reserves has shown rather wide fluctuations during the month, affected chiefly by Treasury disbursements and receipts. During the week ended the 11th reserve balances with the Reserve Banks reached a new high level of \$5,388,000,000, the increase coming from Treasury payments to the market, which in part were made out of the stock of "free" gold. On the 15th, however, the Treasury balances were replenished by the quarterly income taxes and by payments for the new issue of Treasury notes, and bank reserves were accordingly reduced, standing at \$5,236,000,000 on the 25th. At the high point, the surplus of reserves over requirements was estimated at \$2,820,000,000, a new record, and more than half of the total reserve balances.

Reduction of reserves through these Treasury operations is of course temporary, as subsequent disbursements for Government expenses will restore the funds to the market. The gold movement will also add substantially to reserves, while the only factor which may reduce them in the immediate future is the seasonal rise in currency in circulation. This rise is usually rather small until Thanksgiving and after, when holiday demands become active. Hence it appears that reserves will again be restored to something like their former level.

Loans and investments of the reporting banks have shown the large increase of \$550,000,000 in the month to date, but \$375,000,000 of this gain came in the week of the 18th, representing subscriptions to the new Treasury notes. The item of "other loans," however, has also been rising, with a gain of \$82,000,000 in two weeks and of \$153,000,000 since the seasonal low point at the end of July. This item includes a number of miscellaneous uses of credit, but usually is roughly indicative of commercial borrowing. Loans on securities have shown no significant change.

The Bond Market

The decline in prices of Government and high-grade corporate bonds, which had been sharp during August, carried farther in the middle of September, but was followed by a rally and a considerable improvement in the market tone. The European situation was a factor in the renewed unsettlement, causing some nervous selling on apprehensions of an international conflict.

It is readily understandable, with bond prices in the highest area since the turn of century, and new issues carrying the lowest coupon rates in a like period, that the market should be sensitive to implications of a change in the trend of interest rates. The uptrend of business itself leads to expectations of a greater demand for money. In the Government market the continuing Treasury deficit and the possibility of payment of the veterans' compensation certificates next year are special factors of uncertainty. However, there is no evidence of change in the basic money situation, which has already been described. It is clear that the funds available for business expansion and investment are still enormous, and not being reduced in any material way.

Coming at a time when the trend of the market seemed a little uncertain, the heavy demand which developed for a new issue of \$30,000,000 State of New York serial 2¼ per cent bonds, with maturities of one to 10 years, has had a reassuring effect on sentiment. The offering was purchased by a group headed by this Bank, at an interest cost to the State of 2.1463 per cent, and resold at prices to yield 0.35 to 2¼ per cent. The quick sale is evidence of the demand existing for securities of this grade.

New offerings have been heavier during the month, including six corporate issues ranging from \$20,000,000 to \$50,000,000 in amount. With the exception of part of one of these issues, the proceeds will be used for refunding purposes. The continued substantial volume of new security offerings is an encouraging development. The total for the first eight months of the year, as compiled by the Financial Chronicle, has been \$3,101,000,000. This

represents an annual rate of over \$4,500,000,000, the largest for any year since 1930. An analysis of the figures, however, shows that borrowings by municipalities, states, government agencies, etc., accounted for about 57 per cent of the total this year, while corporate refunding was 37 per cent, so that corporate new capital issues represented but 6 per cent.

On September 3 the Secretary of the Treasury announced an offer of $2\frac{3}{4}$ per cent bonds of 1945-47, in exchange for the Liberty 4th $4\frac{1}{4}$ s called for payment October 15; also an offering of $3\frac{1}{2}$ year $1\frac{1}{2}$ per cent notes, for cash or exchange. Due to the subsequent decline in Government bond prices, which carried the market for the $2\frac{3}{4}$ s for some days below par, acceptance of the exchange offer proceeded more slowly than in the case of the earlier exchanges. Up to September 23 holders of the called Liberties had applied for \$429,000,000 of the new long-term bonds; but with their price back above par, this total will doubtless be materially increased before the exchange offer is closed. Exchanges for the notes totaled \$367,000,000, and about \$500,000,000 were sold for cash.

Evidently in sympathy with the moderate easing in short and medium term obligations, rates on the weekly issues of Treasury 273 day discount bills have continued to firm slightly. The latest issue sold at 0.228 per cent per annum, compared with the fantastically low figure, two months ago, of 0.073.

Taxes on Trade

One of the most serious problems facing American business and the American people today is the continued increase in taxes and government expenditures. Published financial statements of leading corporations for the year 1934 and the first half of 1935 show that there has been an improvement of profits in numerous lines of industry but that the level of earnings is still low as compared with pre-depression years. The reports give striking evidence of how recovery in earnings is being held back by rising costs and taxes, and illustrate the difficulties that are being faced by hundreds of thousands of large and small corporations, partnerships and individual businesses throughout the country.

The heavy tax burdens of the railroads and public utilities are well known. Last year the Class I railroads paid taxes of \$239,498,000, although they had a deficit after fixed charges of \$32,251,000. Over one-sixth of the nation's electric light and power bill goes for taxes. Last year the Bell Telephone System paid an average tax of \$6.76 for every telephone in service, while taxes absorbed about 60 per cent of Western Union Telegraph net earnings before taxes.

It is probable, however, that the general public has not fully realized the increasing tax burdens that are being imposed upon the various lines of manufacturing and trade.

Processing and other taxes have caused higher selling prices for such essential goods as meat, flour and bread, sugar, dairy products and miscellaneous food products and have at the same time reduced the customary narrow margin of profit for large numbers of well managed companies to the vanishing point. Among other industries that are laboring under the handicap of heavy taxes might be mentioned automobiles, tires and petroleum, cotton goods, tobacco products and the recently legalized liquor industry. The petroleum industry now pays practically 200 different kinds of taxes and the sum-total of taxes paid by the industry during the thirteen years 1921-1933 was two and one-half times the profits in those years. In 1934 the taxes paid by oil companies averaged \$5.32 for each share of their capital stock or more than five times earnings, which averaged \$1.02 per share.

Taxes on Merchandising

Perhaps the most extreme and discriminatory cases of taxation are found in the merchandising field. More than half of the states have in recent years enacted special taxes against chain store organizations, providing for a graduated rate of tax based either upon the number of stores or the volume of sales, or both. These special taxes, the first of which was enacted in 1927, were originally for the purpose of penalizing chain stores so as to aid local independent merchants, and the question of revenue was of only secondary importance. In 1933 to 1935, numerous states have introduced such laws for the dual purpose of curbing chain stores and of obtaining new sources of revenue with which to meet the ever-expanding expenditures of state and local government.

Practically all of these special taxes are discriminatory; some have been upheld by the Courts, some have been declared invalid and others are in the Courts at the present time. The usual form of tax is an annual license fee depending upon the number of stores or branches operated within the state, beginning with a nominal fee of \$1-\$10 per store and graduated up to \$100-\$500 per store. States having this form of tax include Alabama, Colorado, Idaho, Indiana, Kentucky, Louisiana, Maine, Maryland, Michigan, Montana, North Carolina, South Carolina, South Dakota, West Virginia and Wisconsin. In Louisiana the rate goes up a maximum of \$550 for each store, and the tax is computed not upon the number of stores operated in Louisiana but upon the total number of stores operated by the organization everywhere.

A number of states, including Florida, Iowa, Minnesota and South Dakota, have both a graduated license tax and a graduated sales tax, the latter depending upon the volume of sales or gross income. The Iowa law recently enacted assesses a license tax of \$5 to \$155 per store, plus a graduated tax on gross receipts ranging from 1/20 of one per cent up to 10 per cent. In addition to state license and sales taxes, and certain miscellaneous taxes, such as those upon inventories, a number of municipalities and even counties in certain states have also passed graduated taxes on chain stores.

These special taxes upon chain stores are of course in addition to the regular property taxes and income taxes, as well as the general sales taxes of 1 to 3 per cent that are now in effect in twenty-four states.

The Margin of Profit

The rising cost of living, and particularly the rise in food prices, has been the cause of increasing complaint on the part of consumers, many of whom assume that the retail merchants are to blame for marking up prices so as to obtain excessive profits. There have been frequent demands for more government regulation of the chain store organizations, which distribute something over one-third of all groceries sold at retail and are important factors in a number of other lines.

In the last Congress a bill was introduced by Representative Patman and Senator Robinson (H.R. 8442; S. 3154) to curb chain stores and large independent stores by making it unlawful to give or to receive certain advantages in the way of prices, discounts, allowances, etc., in connection with purchases, and ordering another investigation of chain store operating practices. The Federal Trade Commission has been conducting an exhaustive investigation of the chain store industry for the past six years in response to Senate Resolution 224, and has published its findings in a series of thirty-four reports, the last of which was rendered early this year. The practice of granting and obtaining special prices between producers, manufacturers and merchants, based on quantity purchase and other special considerations, is probably as old as business itself and has been an important factor throughout the years in holding down costs and retail prices. The government itself, in its extensive purchases of equipment, materials and supplies, follows the practice of inviting bids and awarding contracts to the lowest bidders, and after the N.R.A. established minimum prices and maximum discounts, regulations were issued permitting bidders to offer goods on government contracts at 15 per cent below the prices that could lawfully be quoted to any other purchasers. The chain store and

other large merchandizing organizations feel that the Patman investigation is aimed to punish the large and efficient distributors and that the bill would set up complicated restraints to trade that are unfair, uneconomic and unenforceable.

While the net profit, in dollars, of a number of these organizations is substantial, the ratios of profit to volume of business or to invested capital is surprisingly small. A group of eighteen grocery store chains for which sales figures are available, including such leading organizations as the Great Atlantic & Pacific Tea Co., Safeway Stores, Kroger Grocery & Baking Co., American Stores Co. and First National Stores, shows the following results for the last two years:

Calendar or Fiscal Year	Net Sales	Net Profits	Profit per \$ of Sales
1933.....	\$1,696,808,000	\$41,701,000	2.5c
1934.....	1,777,528,000	30,084,000	1.7c

Despite the gain of 5 per cent in sales from 1933 to 1934, the increase in expenses for merchandise, wages and taxes caused a decline in profits of 28 per cent, and the profit per dollar of sales declined from 2.5 cents to 1.7 cents. Expressed in another way, on the purchase by a family of \$60 worth of assorted groceries, the weight of which would total over one-quarter of a ton, and would represent a good many trips to the store and a good many parcels to carry home, the net profit to the grocer for all of his services, risks and return upon invested capital would be about \$1. A dollar nowadays, if used on various other things for which the public is spending freely, would buy a carton of cigarettes, or a couple of cock-tails, or five gallons of gasoline for the automobile, or take two people to the movies.

This 1.7 cents profit per dollar of sales is the average of a few of the large companies, and the rate undoubtedly would be lower if figures were available to include all of the smaller and less successful companies, firms and individuals and the large number of grocers that fall by the wayside each year. Reports for the first-half year of 1935 indicate a continuance of the trend of increasing sales but decreasing profits.

Even in the years when the general level of business earnings was relatively high, the profit margin of the representative grocery chain system was relatively narrow. The record of the Great Atlantic & Pacific Tea Company, which operates the largest system of grocery stores in the world, is typical. This business was originally established in 1858, and when operating details were first issued in 1916 the sales were around \$44,000,000 per year, from which they have expanded until they are over \$800,000,000 at the present time and were around \$1,000,000,000 in the years of 1929-1932. During the twenty-year period

ended February 28, 1935 the company had aggregate sales of approximately \$10,334,000,000, while its combined net profit for the period was about \$269,000,000, representing an average profit of but 2.6 cents per dollar of sales. In no year throughout the period was the profit of this successful and rapidly growing company as much as 4 cents per dollar of sales.

In the case of chain stores in other lines, such as the five-and-ten, apparel, shoes, tobacco, drugs, etc., as well as the department store and mail order fields, the record of representative companies will be found quite similar to that of the food chains, with large turnover at small profit margins being the fixed policy necessary in order to meet competition.

Of the savings which they have effected in distribution, the major part has gone to consumers, their own profits being a minor part. All savings of waste are a social gain; all of the gains in social welfare throughout the past have been by finding and adopting better ways of doing things. The rivalry and the lessons taught by chain store systems have stimulated and improved all retail merchandising, making it more serviceable and economical. The matter of first consideration in sound economic policy is service to the consumer. Everybody is a consumer and shares in these benefits, whereas if every producer or every purveyor is allowed to increase costs to the public, the result will be waste everywhere, higher costs for all and no gains to anyone. Progress would be at a standstill. The public should not be taxed on daily needs to maintain out-of-date methods of business or excessive costs of service.

The Sum-Total of Taxes

Without entering into discussion as to the relative merits of the various forms of taxation, it should be apparent to everyone that if the present rate of tax increase continues the point will be reached, if it has not already been reached, where the total cost of government is greater than the country can safely afford. An increasingly large portion of the American people is being supported directly or indirectly by government expenditure, including regular office holders, employees of many new bureaus, school teachers, employees on public works and in industries supplying materials for public works, members of the Civilian Conservation Corps, farmers receiving benefit payments, former employees receiving pensions and 20,000,000 being supported by F.E.R.A., not to mention the large numbers of people benefitted by loans from R.F.C., F.C.A., H.O.L.C. and other credit agencies, of which there are now more than thirty. Thus a diminishing portion of the population is left to produce economic goods and to pay the taxes. Further increases in taxes must further

raise the cost of living and further restrict business profits and business expansion.

In those cases where taxes, either present or potential, are raised to such a point that concerns operating at deficits or on the border line of profits are forced to liquidate, the tax-base is reduced and the unemployment and relief problem made worse. Any specific tax by itself may not appear burdensome, but with the long-term trend in this country toward imposing large numbers of new taxes and increasing tax rates by Federal, state and various local governments, the sum-total of all taxes has absorbed an increasingly large portion of the national income, particularly since national income has fallen back to around the levels of twenty years ago.

The total tax bill in 1929 was calculated at approximately \$9,759,000,000 and the total national income produced in that year was estimated at \$83,000,000,000, so that taxes represented 11.8 per cent of national income. In 1934, the total taxes were approximately \$9,500,000,000, the decline in income taxes being largely offset by increased payments of other taxes, while national income had declined to \$47,600,000,000, so that taxes represented 20.0 per cent of national income. The 1934 national income had recovered somewhat from the low point of 1932 and was 41 per cent above the pre-war level of \$33,700,000,000 in 1913. The 1934 tax bill, however, was 334 per cent above the 1913 levy of \$2,187,000,000.

Wealth and Its Distribution

This is the third article in the series under the above heading. The first was prompted by an interview with Henry Ford which appeared in the New York Times July 7, and was written about his interview and career, because together they afforded a striking example of wealth creation and distribution. Wealth cannot be distributed until it is created; therefore, the emphasis is first upon creation, and Mr. Ford has been a conspicuous demonstrator of how it is done.

The first article defined "Wealth" as "desirable things," i.e., "things for which people will willingly give their own labor or products in the markets." That is a general description, but surely not difficult to understand. It is important to distinguish between *real* wealth that in itself satisfies some human want, and such instrumentalities of business as money, bank checks, promissory notes, bonds, stocks, and other evidence of claims or ownership which are often talked about as wealth.

Different kinds of wealth have different values; moreover, value is a mental conception, often affected by circumstances, so that the same thing may have differing values to different people, or differing values to the same person at different times. Thus there is what

may be called an order of precedence in values in every person's estimation. After the air we breathe, which is free, food and water rank next in everyone's wants, and then clothing and shelter. After these are supplied for immediate wants, the human mind turns to other interests, and if the individual has buying power he will broaden his purchases to include other things.

Buying power all exists in labor, the products of labor or natural products or resources that are serviceable either as real wealth in themselves or in the production of real wealth as described above. Although commodities and services are priced in money, this is only an order on the markets for our choice of other things. Everybody's buying power is in what he has for sale, and the buying and selling in the markets is practically an exchange of goods and services.

The Changing Industries

In the first and second articles of the series we have pointed out that 100 years ago more than 75 per cent of the population of this country lived on farms and had to live there and work from sunup to sundown in the growing season, with the hand tools in use at that time, in order to produce the food and materials for clothing for the population. The need for these things came ahead of all other needs, but close along with them was that for shelter—houses—the materials for which came from the forests and other natural sources.

It was not until these immediate wants were satisfied that any labor could be spared to satisfy wants less pressing. There was no time to make automobiles then, if anybody had known how to make them, and few persons could have bought them if they had been made. A lot of things had to come before automobiles. Thus, while at that time three-fourths of the people had to be farmers, there were also loggers, lumbermen, carpenters, bricklayers, stone-masons, and other builders. Common clothing was made in the homes, stitch by stitch by hand sewing, shoes by the cobbler in like manner; carts, wagons and "chaises" in like manner.

In such early writings as the account of the building of King Solomon's Temple, in the Old Testament, we read of the building trades of that time, and of artisans, artificers, armorers, builders of chariots and boats, workers of textile goods and ornaments, makers of beautiful fabrics and coats of many colors. All of these workers were engaged in creating forms of "wealth" that were in demand in those times. Down to a little more than 100 years ago, everything was done by hand labor, except as animals were domesticated and transportation over water was aided by the sail.

The "Division of Labor"

The tendency of workers to specialize in different kinds of work already evident in the earliest times, of which there are historical records, has been called by economists the "division of labor." It resulted from variations in natural aptitudes, in climate and natural products and from the further fact that by concentrating upon one kind of work the workman acquired skill. The combined production of a social group was seen to be greater under this division of labor than if each person attempted to supply all his own wants independently. This was the beginning of *trade* and of the economic system, which has gone on developing upon these simple principles from that time until now. The principle of specialized production and exchange is sound and permanent. It cannot be abandoned, for progress in science and industry depend upon it. No human being can be an expert in all fields of knowledge; men spend their lives to maintain mastery of a single branch of knowledge. Human advancement requires an exchange of knowledge, and this leads to an exchange of services and of all the products of learning, skill and industry. This organization of all the factors which contribute to the satisfaction of our common wants constitutes the "economic system."

We have seen that the division of labor and exchange of services and products had been adopted in the very earliest societies of which we know, but it was a simple system limited to the products of hand labor and by the methods of that time. Even so late as 100 years ago the varieties of merchandise were comparatively few in number, probably not so long a list as that of the contents of a modern drug store. Nevertheless, even then, a member of any specialized occupation had become a member of an *organization* and as such had become dependent in some degree upon others, and was not longer independent. He was exchanging services with his fellows in a mutually serviceable and dependent relationship. As industry has developed and products and services have multiplied, even single industries, for example, shoe making, are specialized into many divisions, which must work in harmony in order to accomplish the gains in view.

Moreover, all of the gains of this grand system of specialization are dependent upon the regular flow of the exchanges, for the goods and services moving in trade are paying for each other. The vital point in this system is in the exchanges. The always increasing variety of products and services must be offered in right relations to each other, both in quantities and prices, or the flow of the exchanges will fall into disorder, and a blockade will result, with such resulting conditions in industry and trade as have been witnessed in

the last five years. Wars always have been the chief cause of such disorganization.

In short, the highly organized and highly efficient economic system, which in working order supplies a higher standard of living than ever was possible before, in its very nature is a complex of interdependent relationships, and if thrown into disorder like any intricate mechanism is compelled to slow down or stop until restored to order. Every part of any organization, from a ball team to a locomotive, must perform its function or every other part will be a loser in the final result. It is of the utmost importance for all to understand that since all groups of the economic system are selling to each other, disorder in relationships and loss of purchasing power anywhere will affect the purchasing power of all. The system is essentially mutual and co-operative. Perfect balance between the parts would mean perfect reciprocity and ideal conditions: perfection may not be looked for in human acts or relations, but the natural laws are unerring, and the law of supply and demand works constantly to maintain the equilibrium. It is up to the human factors to co-operate with it.

Evidently disorganization may be more serious now than in the simple system of 100 years ago, when production was in small shops by hand labor and trade was between neighbors. A higher intelligence and better understanding of mutual relations is required to operate the system than in the old days. Industry and trade have changed, and former methods would be totally inadequate to serve the needs of this time. Most persons who talk about the good old days have little knowledge of them, or conception of what living conditions would be for 125,000,000 people in this country if all production, transportation and other services had to be by the methods of 100 years ago.

The Advent of Steam and Machinery

We have seen that wealth consists of desirable things produced by the application of labor to the "natural resources", and "trade" has developed by the efforts of men to increase the supplies of these desired things by the mutual gains arising from the specialization of labor and exchange of services. It is natural to choose the easiest way of doing anything or the shortest way to any place we want to go. We call it "saving" labor or time, but it does not mean accumulation or waste of either labor or time. It means that the labor-power or time are saved for other uses.

The articles in our August and September numbers discussed at some length the gains by means of machine development and improved organization, as illustrated by the careers of Mr. Ford and other men who have

created large industries. We wish now to supplement their exhibits by a brief account of the gains which have resulted from the development of new sources of power.

About 150 years ago (a short time in history) a development occurred which in its direct influence upon human welfare has been of greater importance than any other in all past time. This was the demonstration that by the conversion of water into steam and the utilization of the expansive power of steam in a cylinder to drive a piston, the power thus controlled could be made to drive machinery to *do work*, thus supplementing the labor of man with a force that never tires. James Watt, an English engineer, has the distinction of consummating the method by which the idea became a practical success, although others had worked upon it and contributed to the final achievement. All progress in science and industry has been achieved in like manner, step by step, by the joint efforts of many minds.

The first work to which the steam engine was applied illustrated the fact already emphasized that its destiny was not to take the place of human labor, but to supplement it and increase its capacity to produce the "desirable things" that constitute "wealth": its first use was in pumping water from coal mines, a task in which hand labor was unavailing. The forests of England had been cut away and resort was had to coal; the shallow pits were being exhausted and the inflow of water presented a problem. The suction pump had long been in use, and now the steam engine supplied the power. Stationary steam engines were soon applied to machinery for various purposes and in 1814 George Stephenson built the first locomotive that could be called a success. The first railroad carrying passengers was opened in 1825, from Stockton to Darlington, 38 miles, and the second in England, the Great Western, between London and Bristol, 117 miles, was opened in 1835, and has just celebrated its 100th anniversary.

Thus was inaugurated the use of steam power for both production and transportation, opening a vast field for development in the service of mankind. It was the first employment of the energy that science has since discovered to be stored in all the natural elements, and constantly radiated to the Earth from that great source of heat, light and power, the Sun.

Immediately, inventors were active in all the industries, devising machines to supplement the labor of workmen in the production and exchange of "wealth." Railroads were soon building in many countries, and by that time steamboats were plowing lakes and rivers and in 1817 the ship "Savannah," owned in the American port of that name, a side-wheel vessel operating partly under steam but also

using sails, was the first "steamer" to cross the Atlantic. By 1850 commerce was feeling the new stimulus, and in the 'fifties railroad building in the United States made great strides, stimulated by land grant subsidies to open up new lands for settlement. From that time on the flow of American products to Europe increased rapidly.

Few people have any adequate conception of the advance in human welfare that resulted directly from the development of steam power and other achievements of science in the period that has followed. It is estimated that the population of Europe grew from 180,000,000 in 1800 to 460,000,000 in 1900. It had this growth in comparison with the growth to 180,000,000 in all preceding time because of more favorable living conditions. Moreover, this growth was despite the fact that since 1800 Europe has sent millions of her people to populate new countries. America was giving new sustenance, life and inspiration to the old world. The nightmare known as the Malthusian doctrine, viz, that population increased faster than the means of subsistence, faded out of mind.

The decades of the 'thirties and 'forties of last century were critical times. Population was crowding upon the means of subsistence. The second of these periods has been known as the "hungry forties," for food supplies were distressingly scarce throughout Europe. The masses of the people lived in hovels with dirt floors, the cities were without drainage, good water or sanitation, and the degradation and poverty were indescribable. Mob outbreaks and revolutionary agitation were general over Europe in the 'forties. This was the low point in Europe. With the advent of steam-power and the railroads in America, population flowed outward and foodstuffs and remittances flowed inward in rapid increasing streams.

The Development of Steam Power in the United States

The civil war in the United States from 1861 to 1865 interrupted and delayed development, but did not stop it. An outburst of activity followed, checked by the economic disorder resulting from the readjustments from war conditions to peace conditions, which came to a crisis in the panic of 1873. The fabricating industries were young, and the first general survey of them was given by the Centennial Exhibition at Philadelphia in 1876, celebrating the 100th anniversary of the Declaration of Independence which marked the birth of the Nation.

This is within the recollection of persons now living, as the writer of this article can testify. As a boy in his 'teens he spent five days at the Centennial, and the center of his interests was the great Corliss engine in the

Machinery Hall, which drove all the machinery on exhibition. It was said by the engineering profession to be in line with the best achievements in power development at home or abroad at that time.

Forty-one years later, the writer hereof, in charge of this publication, addressed a letter to the President of Stevens Institute of Technology, a well known institution, and asked for a summarized statement of the progress made in steam power development since the Corliss engine of the Centennial was built. It happened that Professor Anderson of the engineering department of Stevens also had visited the Centennial as a youth, and had been so impressed by the Corliss engine that he adopted engineering as his profession. He undertook the preparation of the paper requested and it was published in the September number of the Letter, 1917. Although necessarily condensed it described the most important developments, occupying about three printed pages in small type.

The final measure of gains in engine and boiler efficiency is afforded by coal consumption, for the work of the power plant is the conversion of the energy stored in coal into energy delivered by the engine to machinery doing work. Professor Anderson's calculation showed that a modern turbine steam engine and boiler plant generating equal power with the Corliss engine and boiler would do it with a saving of 59 per cent in coal consumption.

Professor Anderson summarized the increase in boiler economy as due to a variety of factors, naming "perfect fuel combustion with a minimum supply of air, minimum radiation losses, superheated steam, maximum heat in feed water, and minimum heat rejected in chimney gases."

In our discussion last month of the achievements of the automobile industry in reducing costs while improving quality, we referred to aid received from the industries contributing materials, mentioning particularly the steel and rubber industries, although these are by no means the only ones entitled to such credit. In like manner, Professor Anderson in reviewing the improvements in the use of steam for producing power says that "developments in the contributory arts must be given credit," and specifies as follows:

The theoretical advantages of high steam pressure and superheated steam were for a long time appreciated, but it was not until a lubricant was found that could withstand the high temperatures, that the use of superheated steam became feasible. The improvements in the fabrication of iron and steel, the development of the present day steel alloys, together with the application of heat treatment, have made possible the higher pressures, the lighter weights and the higher rotative and reciprocating velocities, all of which contribute to the economy of operation and reduction of fixed charges.

We cannot follow the Anderson article into its details. It includes a table showing total

available horse power per each 1,000,000 inhabitants at each census date, and the percentage share generated by steam, water, internal combustion of gases, and through electric motors. The last two sources of power did not figure in census reports until 1889, when the first named had a percentage of 0.15 and the second of 0.26. The total unit of mechanical power available per 1,000,000 population in 1879, measured by the horse-power unit, was 68,182, of which 64.1 per cent was steam power and 35.9 per cent water power. In 1915, the latest report given by Anderson, the corresponding total was 482,392 horse power, of which 61.2 per cent was derived from steam, 24.4 per cent from falling water, 14.3 per cent from internal combustion engines and 51 per cent through electric motors. The appearance in the table of the electric current as a form of energy and its rapid increase in use is another story to be dealt with hereafter. It will be observed that in the above statement of percentages, electricity is not treated as an original source, having been generated by steam, water or internal combustion engines.

Power Generation Since 1917

Recently we have desired to bring Professor Anderson's review of power development up to date, and learning that he had retired from Stevens Institute, we sought the aid of a well known engineering authority, Mr. Geo. A. Orrok, New York City.*

In compliance with our request, Mr. Orrok has compiled the following tables, which while not following the same form as those given by Professor Anderson afford another trustworthy calculation of the increase in available horse-power since about 1876, but down to 1935 instead of to 1915. The first of these tables is an estimate of power-producing apparatus, January 1, 1935, and the second quotes accepted estimates for the available power at preceding dates:

Power-Producing Apparatus in United States As of January, 1935

		Horse-power
Central Station	Steam	33,000,000
	Water	15,000,000
	Oil	1,000,000
	Railway	5,000,000
Industrial	Steam	20,000,000
	Oil	3,000,000
	Gas	3,000,000
	Water	1,000,000

*Consulting Engineer, New York, N. Y. Mem. A.S.M.E. Mr. Orrok was for many years mechanical engineer for the New York Edison Company, being responsible for the design of numerous power plants. He has served as consulting engineer for many companies, specializing in power generation, coke ovens, water power, and many other mechanical and chemical applications. He has made a study of European engineering practice in connection with power plants. He has served as consulting professor of steam engineering at the Brooklyn Polytechnic Institute, and as graduate lecturer in steam engineering at Yale University. Since 1927 he has lectured on steam engineering at Harvard University.

Mines and Quarries	7,000,000
Stationary not Industrial	5,000,000
Locomotives	135,000,000
Ships	20,000,000
Agriculture and Traction	300,000,000
Automotive	650,000,000

Total.....1,198,000,000

Power-Producing Machinery in the United States

Thurston's Estimates.....	1870	6,000,000
	1880	9,000,000
	1890	14,000,000
	1900	21,000,000
Rushmore	1912	130,000,000
Low	1924	704,266,000
Orrok	1935	1,198,000,000

Transportation has uniformly used two-thirds of the power-producing machinery.

The figures for available horse-power in 1915 given by Professor Anderson, (482,392 to each 1,000,000 of the population) were arrived at by dividing the total of estimated power by 101,577,000, the continental population of the United States in 1915. It should be noted also that these figures do not include automobiles, steam vessels or steam power, aggregating in all an estimated 105,000,000 horse power, which should be added to bring them into correspondence with Mr. Orrok's figures.

Use of Fuel by Utilities—Equivalent Fuel per Kilowatt-Hour

The figures below by Mr. Orrok are central station results. The comments following are by him:

Use of Fuel By Utilities—Equivalent Fuel per KWH.

1876	12 lbs.
1890	8
1900	5
1910	4
1920	3
1925	2.1
1930	1.62
1934	1.45

To generate the 60 billions of kwh. used in 1934 with the machinery used in 1876, 300 million tons of coal would be used. Actually 42 million tons were used, a reduction of 86%.

The Centennial Corliss Engine used 2.2 lbs. coal per IHP equivalent to 3.5 lbs. per Kwh. Today at several central stations a Kwh. is produced with the expenditure of .9 lbs. of coal, a reduction of 75%.

Central Station Industry: average wage in 1876, 16c per hr.; average wage in 1934, 51c per hr.; 247,000 employees in 1934.

No good figures for HP of motors in use but it is probable that the total HP is roughly 120 million and may be larger. The estimated motor demand is about 39 million HP.

These authoritative figures upon the growth of power production and the increasing efficiency of the industry since 1876 afford a basis for much pertinent comment. Of greater significance is the indication it gives of the vast increase in the production of wealth—"desirable things"—by the industries using the power, and the widespread distribution. The intensive, unceasing efforts of steam-power engineers to improve the efficiency of boilers and engines have been paralleled by like efforts on the part of mechanical engineers to

improve all kinds of machinery. The reader can create a mind picture of his own of this swelling stream of products, in ever-increasing variety, which has been flowing out from the industries and has been purchased by the public.

A large part of these products are for immediate or early consumption, such as manufactured foods, but the greater number consists of goods having some degree of "wearing" or "durable" qualities, as in clothing, furnishings, automobiles and dwellings. Hence the terms, "consumption goods," "semi-durable" and "durable" goods. The last applies not only to dwellings but to business property, such as buildings, railroads, ships and the equipment used in production and transportation, these being known also as "capital goods," because employed in producing other wealth. In the latter class may be also included, public improvements, such as highways, publicly-owned utilities, public buildings, etc.

The production of all of these kinds of goods and facilities has been vastly increased by this increased supply of steam-power. Moreover, in considering the distribution of these different classes of wealth it is evident that the "capital goods" have value only for the purpose of producing "consumption goods" to serve the individual wants of the population, and that this is the ultimate purpose of all power production. The breadth of distribution of goods thus ministering to individual wants, including the semi-durable and durable kinds, is shown by the statistics of these industries. It cannot be questioned that the standard of living of the population has been steadily raised by this increase in the facilities of production.

Obviously this vast increase not only in power equipment, but in the machinery which uses the power, represents an "investment of capital" necessary to this increasing production. These investments—often called "fortunes"—exist where they are because they have to be there to supply the wants of the people. It is pertinent to mention further that in so far as new installations of power equipment or machinery have taken the place of old equipment they are a substitution of new capital for old, an abandonment of the old for something better. In discussing all "fortunes" existing in the form of industrial equipment, it is important to take account of the temporary and uncertain character of such property values. They consist of "semi-durable" goods. New capital is constantly crowding out and superseding old capital in the service of the public.

The actual coal consumption in central power stations in 1934, as shown by Mr. Orrok,

was 42,000,000 tons, which compares with 300,000,000 tons that would have been required to generate the same quantity of power by the best productive equipment of 1876. The labor of mining 258,000,000 tons of coal was "saved" and also the labor of transportation and of shoveling this coal into the fire-boxes and other incidental costs.

The total production of bituminous coal in the United States in 1934 was 358,395,000 tons, as reported by the Bureau of Mines.

Obviously the coal mining industry has been unfavorably affected by increasing efficiency in power production and the consumers of all products, including coal, have been benefited. The coal reserves, which cannot be replenished, have been conserved for succeeding generations.

The effects upon the coal industry raise the old question which has been debated ever since the steam engine was invented, viz: whether machinery which increases the capacity of man for producing the things he wants is a blessing or a curse to the wage-worker. This includes the question whether ownership of the machinery of production as in the free economic system enables the owners to withhold an unfair share of the products of the industries for themselves, to the disadvantage of the wage-earners, and other questions.

We cannot continue this discussion further at this time, but as said last month, we have only crossed the threshold of the subject.

Social Credit in Alberta

The province of Alberta, Western Canada, has had a social convulsion which in fact is an economic reaction from an unhealthful "boom" period, promoted by stimulants, such as subsidized railroad-building, subsidized colonizing, subsidized transportation by lakes and Hudson Bay, subsidized publicity, and other political policies, all prompted by a laudable desire to settle the country; and besides the subsidies there were abnormally high prices for farm products, resulting from the War. Settlers poured in upon semi-arid plains, where good crops of wheat were had under favorable weather conditions, but everything depended on wheat.

The War had stimulated wheat production wherever grown outside of Europe. It had cut off Russian exports to western Europe. Acreage doubled in Canada, Argentina and Australia and greatly increased in the United States, aided by the invention of the combined harvester and thresher, and the shift from spring sowings to winter sowings in the semi-arid regions. When the war ended, and Europe regained normal production, European governments restricted overseas imports to preserve their markets to home producers, surpluses

piled up and prices fell. The governments of the United States and Canada sought to support the price, but the law of supply and demand was relentless and the governments were forced to admit defeat. They could not buy a flood of wheat which the markets did not want. Their well-meant efforts were misleading to producers.

With the break of more than one-half in wheat prices, other farm products gave way also and farmers everywhere were in trouble; but the conditions were especially difficult for the new settlers in Alberta, dependent upon one crop, and that affected not only by low prices but drought. Conditions of this kind are harrowing; an upset of the economic balance disturbs the market balance also. All of the conditions are not within the view of the individual farmer, and among the explanations made to him was the insidious one that he was the victim of various conspiracies concocted in the markets and centers of finance. Resort to political action was advised.

The "Liberal" party was in power in Alberta in 1921, when the first big drop in wheat prices came, the Conservative party never having had much show there; but the Liberal party was promptly smashed by the United Farmers party, which rose up spontaneously, and swept everything before it. The United Farmers have been in charge of everything since 1921, but in an election on August 22nd last, it suffered a defeat as ignominious as that which it administered to the Liberals in 1921, a new party called the "Social Credit" party carrying fifty-six legislative seats out of sixty-three in all.

A new prophet and leader had arisen, William Aberhart, a school teacher and Bible class leader, who is said to have unusual facility in mingling scriptural phrases with economics. As his fluency has developed, and he has felt the stimulus of larger audiences, he has climbed into the realms of finance and statesmanship with the above-mentioned results. He has taken up with a certain "social credit" scheme, promoted in England by a certain Major Douglas, who claims to have thought it all out himself, although there is nothing in it that is not at least as old as the French assignats of 1790-96.

All such schemes are developed around the kernel of truth so often emphasized in these columns, viz: that all business consists of exchanging services, which in other words means that products and services really pay for each other in the markets, and that if production is kept in balance and prices in right relations to each other, there will be full employment for everybody and the highest possible standard of living. This is the fundamental principle of the existing economic system as taught

by economic science and continuously presented in these columns. The problem of prosperity consists in keeping production in balance and prices in reciprocal relations, and war inevitably throws the system into great disorder.

Neither Douglas nor any of the new money or social doctors of the present generation have contributed a new idea to the problem. They offer nothing but political control over production and prices, and a government clearing system in place of bank clearings, of which 430 are in daily operation in the United States, accomplishing the settlements between the several sections and the numerous groups of the system. They offer no plans for keeping the system in balance that are not childish in comparison with the law of supply and demand. No government authority can control prices unless its policies conform to the law of supply and demand, but unfortunately government control is invariably invoked for the purpose of obstructing and nullifying the law of supply and demand.

It is true that extraordinary conditions may arise, when Government control or assistance may be temporarily serviceable for obtaining prompt coordination, (as in war time) but always the nursing bottle is wanted indefinitely and usually backed up by political organization.

The sincerity and good purposes of Douglas and Aberhart need not be questioned, but they are misguided by the notion that the bankers make great profits by substituting their credit for money, and that if the Government did this a great "unearned increment" would inure to the public. What they do not understand is that banking is done in only small part upon bank capital and credit, but upon the combined credit of all the people who use banking service. They do not understand that banking service is mutual and cooperative, conducted at heavy expense, and requiring trained and competent management. In short, its requirements are about as far as possible from the proper field of political governments.

It is an old saying that the best proof of the pudding is in the eating, and this is true of all social and economic experiments, although they may be costly. The "social credit" policy has received much publicity and probably Alberta, which stretches from the United States to the Arctic circle and beyond, affords as good conditions for trying it as any place. It has plenty of room for "subsistence homesteads," as well as for the primitive pursuits of hunting and fishing. With 125,000,000 people to be placed and cared for, the United States presents greater difficulties for such an undertaking. However, the Alberta experiment will be followed with interest.

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1935

Economic Conditions Governmental Finance United States Securities



New York, November, 1935

General Business Conditions

THE Fall season is now far enough along to permit a preliminary summing up of its showing in trade and production, and it is evident that the optimistic expectations entertained at the beginning of the season were very well founded. The volume of goods being produced and distributed is in many lines the largest in four or five years. Retail sales have been held back in some areas by unseasonably warm weather, but on the whole have been good. Department store sales in September were 8 per cent over last year according to the Federal Reserve Board's index, which stood for the month at 82 (1923-25=100), the highest figure since November, 1931. In the first half of October the increase was 12 per cent, according to a survey by the National Retail Dry Goods Association. These gains are better than those shown by the chain variety stores, which made the big increases last year, and there are many indications that the public is able to buy not only more, but also higher priced goods.

The railways are moving more freight than at any time in four years, and their aggregate earnings statements will be in the black this Fall, though doubtless they will show a deficit for the full year. Among the industries which are having the busiest Fall since 1930, at least, are a number of those making durable goods, including automobiles, household, farm and office equipment, and light machinery and tools. Electric power consumption is setting all-time high records. Bank debits, reflecting the dollar value of business transactions, have been running higher than in any year since 1931.

Moreover, the earnings of the manufacturing industries, judging by the third quarter reports summarized hereafter in this Letter, are the best since 1930. To be sure, the index of corporation profits compiled by this Bank stands at only 44 per cent of the 1926 average (preliminary estimate), while industrial production is about 80 per cent of the same year. But in 1931 and 1932 the manufacturing in-

dustries operated at a loss and in 1933 barely broke even, according to their tax returns; while for the year 1934 our index was only 31.8. This index, based on the published reports of the larger and presumably more efficient corporations, invariably makes a more favorable showing than the complete reports furnished to the Government.

Chief Support from Automobile Industry

Of course a very important factor in the Fall business situation is the introduction of new automobile models and the advance of the New York Show from January, its former date, to November 2. This policy is a new one, undertaken to spread employment into the Winter months and to reduce the seasonal variations in the industry's operations. In preparation for the new season, assemblies rose to around 200,000 in October compared with 90,000 in September; and it is estimated that the November total will reach at least 300,000, which compares with only 85,000 a year ago. December also will be active. This expansion will bring an equivalent increase in demand for parts and materials, in the movement of traffic into and out of the automobile centers, and in employment, with the trade stimulus felt in a widening circle.

Prices of the new models are for the most part lower than their predecessors. The efforts of the industry to reduce costs by improving machinery and operating methods are unceasing, and its policy as always is to pass on the savings through price reductions, which increase its sales and the employment it gives. The economies accomplished by the automobile manufacturers during the depression have been of incalculable value to all business, in view of the position of leadership occupied by the industry and its importance as a buyer of materials. They have enabled the automobile companies to regain their market very rapidly as economic conditions improved, while undoubtedly higher prices would have blocked the spread of recovery, reduced employment, and put pressure on wages.